

**REMARKS**

**Status of the Application**

In the Office Action, claims 10-24 were rejected. In the present Response, no amendments, additions, or deletions have been made to the claims so that claims 10-24 are pending. No new matter has been added.

**Rejection under 35 U.S.C. §103(a)**

**BETZ IN VIEW OF BISHOP**

Claims 10, 12, 13, 15 and 19-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,261,645 to Betz in view of U.S. Patent No. 4,609,718 to Bishop (which corresponds to EP 204161). More particularly, the Examiner alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a process described by Bishop et al with the use of a diisocyanate in which a linear aliphatic chain containing 6 carbon atoms separates the two isocyanate groups for making urethane (meth)acrylates of Betz et al since Betz et al teach that polyurethane acrylates can be made by a process described in Bishop et al (which corresponds to EP 204161)." The Examiner further alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a coating composition of Betz et al to areas of outer finish susceptible to scratching such as near locks, door handles, etc. with the expectation of providing the desired scratch resistance, since Betz et al teach that the coating composition is scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) and is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5)."

The Examiner claims that Betz discloses "a process for producing scratch resistant (See column 2, lines 61-67; column 3, lines 1-8) multicoat finishes in which a pigmented basecoat applied to the substrate surface, a clear topcoat radiation curable coating composition comprising binders based on prepolymers or oligomers such as urethane acrylates (methacrylates)(See column 5, lines 47-54, 62, 64) is applied atop the resultant basecoat film, and then the topcoat film is cured (See column 9, lines 33-36, 57-67) by means of radiation, preferably by means of UV radiation (See column 10, lines 6-10)." The Examiner also claims that aliphatic

urethane acrylates (methacrylates) are disclosed by Betz at column 6, lines 2-5 as being the particularly preferred binders, and that column 8, lines 14-21 of Betz indicates that these "binders can be used in the coating composition in an amount 5-90%". The Examiner claims that "urethane (meth)acrylates are well-known in the art and can be made by reacting di- or polyisocyanurate with hydroxyalkyl methacrylate and diols/polyols (See column 7, lines 14-54) such as a process described in EP 204 161)(See column 7, lines 52-54). The Examiner also alleges that the "coating composition may if desired include one or more reactive diluents, which are employed preferably in an amount of from 0 to 70% by weight, with particular preference from 15 to 65% by weight, based in each case on the overall weight of the coating composition in the case of clear coats (See column 8, lines 22-34)." The Examiner further claims that in accordance with column 6, lines 12-23, Betz's "prepolymers or oligomers normally have a number-average molecular weight of from 500 to 50,000, preferably from 1000 to 5000 and preferably have at least 2 and, with particular preference, from 3 to 6 double bonds per molecule, and preferably also have a double bond equivalent weight of from 400 to 2000, with particular preference from 500 to 900 (See column 6, lines 12-23)." Finally the Examiner asserts that Betz's "coating composition is particularly suitable as a topcoat for producing a multicoat finish in the sector of the automotive OEM finishing and/or automotive refinishing (i.e. over outer finish) of car bodies and parts thereof and also truck bodies, and the like (See column 10, lines 1-5)."

The Examiner, however, correctly recognizes that Betz "fail[s] to teach that the diisocyanurate is an acyclic aliphatic diisocyanate having 8 C atoms (Claim 10, 13)", and turns to Bishop. Bishop (which correspond to EP 204161), the Examiner asserts, "teach[es] that any organic diisocyanate can be used to form the acrylate-terminated oligomers, such as diisocyanate in which a linear aliphatic chain containing 6 carbon atoms separates the two isocyanate groups (an acyclic aliphatic diisocyanate having 8 C atoms)(See column 3, lines 65+)."

The Examiner further acknowledges that as to claims 23 and 24, Betz in view of Bishop fails to "teach that the clear topcoat is applied to areas of outer finish susceptible to scratching (claim 23) such as near locks, door handles, etc (Claim 24)", but still asserts that it would have been obvious to apply Applicants' claimed coating to these areas.

Applicants, however, respectfully assert that Applicants' claimed invention is not obvious over Betz in view of Bishop. Specifically, Applicants disagree with the Examiner's characterization of Bishop. In fact, while the Examiner claims that Bishop "teach[es] that any organic diisocyanate can be used to form the acrylate-terminated oligomers, such as diisocyanate in which a linear aliphatic chain containing 6 carbon atoms separates the two isocyanate groups (an acyclic aliphatic diisocyanate having 8 C atoms)", Bishop fails to indicate that such diisocyanates can be used to make the aliphatic urethane (meth)acrylates of Applicants' claimed invention. In contrast, Bishop is concerned with producing linear acrylate-terminated polyurethane oligomers—and NOT aliphatic urethane (meth)acrylates in accordance with Applicants' claimed invention—wherein a diisocyanate is reacted with a polyoxyalkylene diamine and a monohydric acrylate. The linear acrylate-terminated polyurethane oligomers of Bishop are just not the same as the aliphatic urethane (meth)acrylates of Applicants' claimed invention.

Moreover, Bishop expressly describes the diisocyanates that can be used in producing his acrylate-terminated polyurethane oligomers as having "a linear aliphatic chain containing at least 6 carbon atoms [that] separates the two isocyanate groups" (emphasis added). The usage of the term "at least" is not a direct pointer to using only a C8 diisocyanate, and is definitely not an express pointer to using the specific C8 diisocyanates of hexane diisocyanate, or methyl pentane diisocyanate. In fact, the hexane diisocyanate and methyl pentane diisocyanate are but two species encompassed by the C8 diisocyanate genus.

In addition, the only diisocyanates specifically mentioned by Bishop include 2,4-toluene diisocyanate, 4,4' diphenylmethane diisocyanate, methylenebis (4-cyclohexyl-isocyanate), trimethyl hexamethylene diisocyanate, and 1,12-dodecyl diisocyanate—none of which are C8 diisocyanates. Finally, a C8 diisocyanate is not utilized in any of Bishop's examples.

For all of these reasons, Applicants respectfully assert that Betz in view of Bishop would not have motivated a person of ordinary skill in the art to specifically select C8 diisocyanate to produce the aliphatic urethane (meth)acrylates of the claimed invention—and certainly not the specific C8 diisocyanates of either hexane diisocyanate, or methyl pentane diisocyanate. As a result, Applicants respectfully assert that their claimed invention is not rendered obvious by Betz in view of Bishop.

Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

BETZ IN VIEW OF BISHOP AND IN FURTHER VIEW OF HEIL

Claims 11, 14 and 16-18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,261,645 to Betz in view of U.S. Patent No. 4,609,718 to Bishop (which corresponds to EP Patent No 204 161) further in view of U.S. Patent No 4,666,783 to Heil. More particularly, the Examiner alleges that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used hexamethylene diisocyanate or polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate as polyisocyanates of Betz et al in view of Bishop et al for preparing polyurethane acrylate polymers since Heil et al teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols."

The Examiner correctly recognizes that Betz in view of Bishop fails to "teach that linear aliphatic diisocyanates having 8 C atoms is hexamethylene diisocyanate (Claim 16); polyisocyanates based on acyclic aliphatic diisocyanates having 8 C atoms contain heteroatom groups linking isocyanate groups together in said polyisocyanates [sic] (Claims 11,14), said polyisocyanates being polyisocyanates with isocyanurate groups or with biuret groups (Claim 17) such as tris-(6-isocyanatohexyl)-biuret or isocyanurate derived from hexane diisocyanate (Claim 18)", and therefore turns to Heil.

Heil, the Examiner asserts, teaches at column 7, lines 54-68 and column 8, lines 4-45 that polyurethane acrylate polymers can be prepared by reacting polyisocyanates with hydroxyalkyl methacrylate and diols/polyols. The Examiner further alleges that Heil teaches at column 6, line 31 "that various diisocyanates including aliphatic diisocyanates such as hexamethylene diisocyanate" and at column 6, lines 54-64 that "polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate to isocyanurate" are suitable for preparing these polyurethane acrylate polymers.

Applicants, however, respectfully assert that Betz in view of Bishop and in further view of Heil do not render Applicants' claimed invention obvious.

As to Betz and Bishop, Applicants reassert the same arguments as set forth hereinabove.

As to Heil, Applicants respectfully assert that there is no motivation to combine Heil with either Betz, or Bishop. As Section 2143.01 of the MPEP indicates, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." Indeed, Heil is directed at magnetic recording media comprising a non-magnetic base and one or more magnetic layers consisting of an organic binder matrix that contains, among other things, a polyurethane acrylate polymer; whereas Betz is directed at producing scratch resistant coatings that are suitable as clear coats/topcoats for the production of a multicoat finish, especially in the automotive sector (see column 2, line 61 to column 3, line 4), and Bishop is directed at producing a buffer coating composition for coating optical glass fiber (see abstract). Applicants have failed to identify a single teaching in either Betz, or Bishop that would lead a person of ordinary skill in the art to turn to the teachings of Heil. Likewise, Applicants have failed to identify a single teaching in Heil that would lead a person of ordinary skill in the art to turn to the teachings of either Betz and/or Bishop.

As Applicants have been unable to find a single disclosure in Betz, Bishop, or Heil that provides any motivation for combining the references in the manner asserted by the Examiner, Applicants respectfully assert that the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection. In the event the Examiner refuses to withdraw this rejection, Applicants respectfully request that the Examiner identify the portions of each reference that allegedly provide the requisite motivation for combining the references.

Furthermore, Applicants respectfully assert that the Examiner is using hindsight reconstruction to arrive at Applicants' claimed invention. In fact, Applicants believe that the requisite motivation for combining Betz, Bishop, and Heil is not coming from the references themselves, but rather from Applicants' specification. Indeed, it appears as if the Examiner, in direct contravention of the statutory mandate of § 103 requiring obviousness to be judged at the point in time

when the invention was made, is using Applicants' disclosure as a blueprint to reconstruct their claimed invention from isolated pieces of Betz, Bishop and Heil. See, *Grain Processing Coro. v. Am. Maize-Prods. Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

The Examiner's use of hindsight reconstruction is evident from her attempt to piece together isolated pieces of Betz and Bishop with the wholly unrelated reference of Heil. Indeed, a person of ordinary skill in the art looking to produce a base lacquer/clear lacquer two-coat lacquering system to be used primarily to coat an automobile in accordance with Applicants' claimed invention would not logically look to a binder matrix used to form the magnetic recording media of Heil.

As a result, Applicants respectfully assert that the Examiner is simply using Applicants' specification as a roadmap for backing the random disclosures of Heil into the disclosures of Betz and Bishop so as to ultimately arrive at her destination of Applicants' claimed invention. As the Examiner's combination of Heil with Betz and Bishop is erroneously based on isolated pieces of these references, and Betz and Bishop are wholly unrelated technologically or otherwise to Heil, the Examiner is engaging in impermissible hindsight reconstruction. As a result, the Examiner has failed to establish a *prima facie* case of obvious. Accordingly, Applicants respectfully request that the Examiner withdraw all rejections predicated on a combination of Betz, Bishop and Heil.

Finally, Applicants respectfully assert that Heil is non-analogous prior art, and therefore cannot form the basis for a 35 USC § 103 rejection. Indeed, section 2141.01(a) of the MPEP indicates that "[i]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992)." What is "reasonably pertinent" is identified in section 2141.01(a) of the MPEP as being a reference, "even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals logically would have commended itself to an inventor's attention in considering his problem." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

It becomes readily apparent upon reviewing the disclosure of Heil, however, that it is neither in the field of automotive coatings, nor reasonably pertinent to the particular problem with which Applicants were concerned.

In contrast, Heil is concerned with magnetic recording media—and not producing a base lacquer/clear lacquer two-coat lacquering system in accordance with Applicants' claimed invention.

Furthermore, Heil is not reasonably pertinent to the problem with which Applicants were concerned. That is, Heil would not have commended itself to the attention of Applicants.

Indeed, Heil is directed to magnetic recording media comprising a non-magnetic base and one or more magnetic layers consisting of an organic binder matrix containing finely divided magnetic material. Specifically, Heil is concerned with improving the electron-beam-curable binders so that a lower curing dose, and therefore less time, is needed to cure the magnetic recording media layers.

As Heil is neither in the field of Applicants' endeavor, nor reasonably pertinent to the particular problem with which Applicants were concerned, Applicants respectfully assert that Heil is non-analogous prior art. Accordingly, Applicants respectfully request that the Examiner withdraw all rejections predicated on these references.

#### BETZ IN VIEW OF HEIL

Claims 10-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,261,645 to Betz in view of U.S. Patent No. 4,666,783 to Heil. More particularly, the Examiner asserts "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used hexamethylene diisocyanate or polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate as polyisocyanates of Betz et al in view of Bishop et al for preparing polyurethane acrylate polymers since Heil et al teach that hexamethylene diisocyanate and polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate [sic] to isocyanurate are suitable for the preparation of polyurethane acrylate polymers by reacting said polyisocyanates with hydroxyalkyl methacrylate and diols/polyols."

The examiner asserts that Betz teaches "that the urethane (meth)acrylates are well-known in the art and can be made by reacting di- or polyisocyanurate with hydroxyalkyl methacrylate and diols/polyols", but fails to "teach that polyisocyanates are acyclic aliphatic diisocyanates having 8 C atoms (Claims 10, 13) or based on acyclic aliphatic diisocyanates having 8 C atoms containing heteroatom groups

linking isocyanate groups together in said polyisocyanates [sic] (Claims 11,14); or polyisocyanates with isocyanurate groups or with biuret groups (Claim 17) such as tris-(6-isocyanatohexyl)-biuret or isocyanurate derived from hexane diisocyanate (Claim 18)." As a result the Examiner turns to Heil.

Heil, the Examiner asserts, teaches at column 7, lines 54-68 and column 8, lines 4-45 that polyurethane acrylate polymers can be prepared by reacting polyisocyanates with hydroxyalkyl methacrylate and diols/polyols. The Examiner further alleges that Heil teaches at column 6, line 31 "that various diisocyanates including aliphatic diisocyanates such as hexamethylene diisocyanate" and at column 6, lines 54-64 that "polyisocyanates derived by biuretization of hexamethylene diisocyanate or by trimerization of hexamethylene diisocyanate to isocyanurate" are suitable for preparing these polyurethane acrylate polymers.

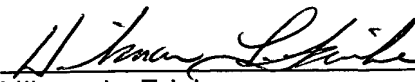
Applicants, however, respectfully assert that for the same reason as already set forth hereinabove, Applicants' claimed invention is not obvious over Bishop in view of Heil. Accordingly, Applicants respectfully request that the Examiner withdraw this rejection.

#### Summary

In view of the foregoing remarks, Applicants submit that the application is in condition for allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicants' representative at the telephone number below to resolve any remaining issues.

Applicants believe that there are no fees due but should there be any fee due which is unaccounted for, please charge such fee to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

  
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